

INTERNATIONAL COMMISSION FOR THE
CONSERVATION OF ATLANTIC TUNAS



COMMISSION INTERNATIONALE POUR LA
CONSERVATION DES THONIDES DE L'ATLANTIQUE

COMISION INTERNACIONAL PARA LA
CONSERVACION DEL ATUN ATLANTICO

Madrid, 27 December 2024

ICCAT CIRCULAR # 12494/ 2024

SUBJECT: CALL FOR TENDERS - TERMS OF REFERENCE - DEVELOPMENT OF AN INTEGRATED BIOECONOMIC AGENT-BASED MODEL TO SUPPORT FAD MANAGEMENT IN THE TROPICAL TUNA ATLANTIC FISHERY

I should like to transmit the Terms of Reference (ToRs) aiming at the *Development of an integrated bioeconomic agent-based model to support fad management in the tropical tuna Atlantic fishery*.

Accordingly, ICCAT is kindly requesting a quotation for such work, which shall be developed according to the ToRs herein attached. The detailed offer shall be submitted **only to the attention of** the ICCAT Executive Secretary, [Mr. Camille Jean Pierre Manel](#), and Cc'ing [Mrs. Stasa Tensek](#), by **17 January 2025**.

I would be grateful if you could distribute this Call for Tenders to qualified people and institutions that may be interested.

For further information concerning this quotation request, please contact [Dr. Miguel Neves dos Santos](#) at the ICCAT Secretariat.

Please accept the assurances of my highest consideration.

P.O. Executive Secretary

Miguel Neves dos Santos
Assistant Executive Secretary

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– **Head Delegates and Head Scientists**

– **Cooperating Parties, Entities or Fishing Entities**

Attachment: Terms of Reference for the Call for Tenders (English version only).



Terms of Reference

Development of an integrated bioeconomic agent-based model to support FAD management in the tropical tuna Atlantic fishery

Background and Objectives

In recent decades the International Commission for the Conservation of Atlantic Tunas (ICCAT) has adopted management measures in an attempt to reduce the mortality of juvenile yellowfin tuna and bigeye tuna in the Atlantic (for example, [Rec. 11-01](#)). Reviews of the efficacy of recent measures by the Standing Committee on Research and Statistics (SCRS) at reducing mortality of juveniles were inconclusive, with the most recent tropical tuna measure (agreed at the ICCAT Commission meeting, 2024) requesting further analysis be undertaken by the SCRS in 2025.

Work is proposed to develop and analyse science-based management measures for management of FAD and related fisheries, given their contribution to the fishing efficiency and extensive use in every ocean.

The Atlantic tropical tuna purse-seine fishery targets bigeye tuna (BET), skipjack tuna (SKJ), and yellowfin tuna (YFT). This fishery is highly dynamic, employing a range of evolving technologies, including the increasing use of fish aggregating devices (FADs). The spatial-temporal dynamics of both species and fishers significantly influence this fishery. Therefore, we propose that a simulation and evaluation of complex management scenarios be developed, allowing for the assessment of social, biological, and economic trade-offs. This work is particularly relevant as it offers a direct solution to the commission's request for assessing the efficacy of FAD-based management measures (Vertpre *et al.*, 2024).

Preliminary, FAD management scenarios to be explored are proposed to quantify impacts on tropical tuna populations in the Atlantic:

- Simulate reductions of individual vessel active FAD limits (by vessel class) at different levels to include measures that have been implemented in [Rec. 19-02](#), [Rec. 22-01](#) and [Rec. 24-01](#);
- Calculate the corresponding % reduction in global and per vessel number of active FADs monitored;
- Compare behavioural assumptions of vessels.

Contractor Tasks

These Terms of Reference outline the development of an integrated bioeconomic agent-based model including preliminary FAD based management scenarios to help aid in responses to the Commission.

The Tasks include:

- Drafting an Atlantic model of the ICCAT region at 1x1 spatial resolution;
- Instantiating vessels in the correct ports and assigning vessel properties;
- Inputting the biology of the tropical tunas stocks;
- Preliminary scenario runs based on the feedback from the Tropical Tuna Species Group;
- Presenting developments to the Tropical Tuna Species Group;
- Meet as required with the SCRS Tropical Tuna Species Group and incorporate suggestions and updates as required.



Deliverables

1. A preliminary report, to be submitted by **15 February 2025** including data acquisition (data sources and spatio-temporal resolution) and a description of the work carried out.
2. A SCRS document and related presentation describing the work done on the preliminary model development to be submitted by **16 April 2025** and presented at the Bigeye Tuna Data Preparatory Meeting (21-25 April 2025).
3. A SCRS document and related presentation describing the work done on the preliminary model calibration to be submitted by **9 July 2025** and presented at the Bigeye Tuna Stock Assessment Meeting (14-18 July 2025).
4. A SCRS document and related presentation describing the work done on the preliminary FAD based management scenarios to be submitted by **12 September 2025** and presented at the SCRS species group meeting (23-27 September 2025).
5. Provide a final report summarising all results and work completed during the project along with all data and code used before **31 November 2025**.

The Tropical Tuna Species Group and its rapporteur and the SCRS Chair, in consultation with the ICCAT Secretariat, will review all submissions of the contract deliverables and communicate any necessary revisions (if applicable) to the contractor and/or inform of approval within 15 days of the submission(s). The contractor shall submit the revised final documents (if changes are requested) together with the regular invoice, within 30 days after the aforementioned 15 days period.

Contractor Minimum Qualifications

- Documented multi-year experience in ICCAT Tropical Tuna Fisheries.
- University degree in one of the following: fisheries science, marine biology, statistics, natural sciences, biological sciences, environmental sciences, or closely related fields (in case of individual scientists).
- Excellent working knowledge of one of the three official languages of ICCAT (English, French or Spanish). A high level of knowledge of English is desirable.

Submission of Proposals

Scientists and public or private Scientific Institutes or entities interested should submit detailed offer(s) only to the attention of Mr. Camille Jean Pierre Manel, Executive Secretary of ICCAT, at the following address: camille.manel@iccat.int and Cc'ing Ms. Stasa Tensek (stasa.tensek@iccat.int) by **17 January 2025 (18:00h Madrid time) at the latest**, including:

- a) A detailed offer, including the description of methodology to be used;
- b) The budget proposal;
- c) A short *Curriculum vitae* of the tenderer, and of the scientists involved;
- d) The name, address, and telephone number of the tendering body;
- e) The institutional and administrative background of the tendering body (e.g. statutes, type of institution, annual budget, budget control procedures, etc.), if applicable;
- f) Acknowledgement of this Call for Tenders;



- g) A statement specifying the extent of agreement with all terms, conditions, and provisions herein included.

If the tender is submitted by an institute/University, it must indicate the expert(s) who will be dedicated to the completion of the tasks and that they will be available to present the work to the SCRS Tropical Tunas Species Group. Offers sent after the deadline or that fail to furnish the required documentation or information, or reject the terms and conditions of the Call for Tenders, will not be considered.

Interested scientists and public or private Scientific Institutes or entities interested in applying shall provide a detailed budget and clearly identify costs related to main activities of the work (e.g. labour, including estimated number of days of work; travel and subsistence).

Selection of Proposal(s)

The ICCAT Secretariat will review the offer(s). Following the revision process, the ICCAT Executive Secretary will notify the entity selected for the contract as soon as the selection process is completed. The contract will be awarded on the basis of competitive tendering and the evaluation of proposals will be undertaken objectively, consistently and without bias towards particular suppliers.

Proposal(s) will be evaluated against a pre-determined set of criteria, which include: i) cost (30%); ii) proven track record (30%); iii) technical merit based on work plan (30%); and iv) flexibility as regards future changes in requirements (10%).

Payment details

Disbursements will be made according to the following schedule:

- 1) **30% of the total amount of the contract upon signing of the contract** and after receiving a regular invoice which may be submitted at the latest 30 days after the signature of the contract.
- 2) **20% of the total amount of the contract upon completion and acceptance of Deliverables #1 and #2** and after receiving a regular invoice.
- 3) **30% of the total amount of the contract upon completion and provision of Deliverable #3** and after receiving a regular invoice.
- 4) **20% of the total amount of the contract after the approval of Deliverables #4 and #5**, and after receiving a regular invoice according to work proposal and a complete set of documents concerning the expenses incurred under the contract.

Logistics

All documents provided by the Contractor must be in MS Word or compatible software; tables must be in Excel format or compatible; figures and pictures must be in JPEG or TIFF format or compatible. Tagging data will be included in the ICCAT tagging database. All documents submitted must be in English.

Copyright

All the material produced by the Contractor will remain the property of the ICCAT, will be kept confidential, and cannot, in any case, be circulated by the Contractor. The scientific use of the data by the Contractor will always be notified to ICCAT in advance for clearance.

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For further information concerning this Call for Tenders, please contact the ICCAT Secretariat the following address: miguel.santos@iccat.int.

References

K. A. Vert-Pre, N. Payette, A. Norelli, B. Powers, M. Drexler, S. Saul, A. Ananthanarayanan, R. Bailey, J. Koed Madsen, E. Carrella, A. Aires-da-Silva, E. Altamirano, D. Fuller, C. E. Lennert-Cody, J. Lopez, J. Marrow, M. Maunder, C. Minte-Vera, G. Moreno, D. Ovando, M. Roman, D. Squires, K. Schaefer, N. Vogel, H. Xu. 2024. Evaluate the impact of alternative management scenarios for the eastern Pacific Ocean tropical tuna species using POSEIDON. Document FAD-08 INF-A